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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,706	01/22/2004	Cem Basceri	102-0075US-2	5194

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EXAMINER

LUND, JEFFRIE ROBERT

ART UNIT	PAPER NUMBER
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1763

DATE MAILED: 03/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/762,706	<b>Applicant(s)</b> BASCERI ET AL.	
	<b>Examiner</b> Jeffrie R. Lund	<b>Art Unit</b> 1763	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 19-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 August 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/04, 7/04, 11/04</u> . | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 19, 23, 24, and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Umotoy et al, US Patent 6,086,677.

Umotoy et al teaches a deposition chamber that includes: a first line 124 coupled to a first source chemical 116 and communicates with a plurality of first holes 1308 in a shower head 130, and a second line 126 coupled to a first source chemical 118 and communicates with a plurality of first holes 1306 in a shower head 130. (Entire document)

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 20-22, 25-28, and 30-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Umotoy et al, US Patent 6,086,677, in view of Shan, US Patent 5,683,571.

Umotoy et al was discussed above.

Umotoy et al differs from the present invention in that Umotoy et al does not teach first and second flow regulators (valve, pump or flow controller) proximate to each of the first and second holes, that the flow regulators are capable of vaporizing the first or second source, or a controller coupled to the regulators.

Shan teaches a gas control system that includes a gas line 40-1 through 40-m connected to a single hole 50-1 through 50-m and each line containing a flow controller 80-1 through 80-m. A controller 90 is connected to each of the flow controllers 80 and can control them independently or in unison. (Entire document) The controllers are capable of vaporizing a liquid source by flash vaporization in which a liquid is flowed through the controllers and then flash to vapor caused by the flow rate, pressure drop and temperature increase.

The motivation for providing the gas controller of Shan for the first and second source chemicals of Umotoy et al is to provide a required gas flow control system as required by Umotoy et al but only generically described, and to enable the control of each hole as taught by Shan to allow the flow rates to be optimized in each hole thereby improving the uniformity of the layer coated.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to add gas flow control system to each of the first and second source chemicals of Umotoy et al.

5. Claims 20-22, 25-28, and 30-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Umotoy et al, US Patent 6,086,677, in view of Jeong, US Patent 5,853,484.

Umotoy et al was discussed above.

Umotoy et al differs from the present invention in that Umotoy et al does not teach first and second flow regulators (valve, pump or flow controller) proximate to each of the first and second holes, that the flow regulators are capable of vaporizing the first or second source, or a controller coupled to the regulators.

Jeong teaches a gas control system that includes a gas line 16-1 through 16-n connected to a single hole 34-1 through 34-p and each line containing a valve 32-1 through 32-n. A controller 22 is connected to each of the flow controllers 32 and can control them independently or in unison. (Entire document) The controllers are capable of vaporizing a liquid source by flash vaporization in which a liquid is flowed through the controllers and then flash to vapor caused by the flow rate, pressure drop and temperature increase.

The motivation for providing the gas controller of Jeong for the first and second source chemicals of Umotoy et al is to provide a required gas flow control system as required by Umotoy et al but only generically described, and to enable the control of

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each hole as taught by Jeong to allow the flow rates to be optimized in each hole thereby improving the uniformity of the layer coated.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to add gas flow control system to each of the first and second source chemicals of Umotoy et al.

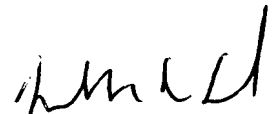
### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited art teaches the technological background of the invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrie R. Lund whose telephone number is (571) 272-1437. The examiner can normally be reached on Monday-Thursday (6:30 am-6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on (571) 272-1435. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jeffrie R. Lund  
Primary Examiner  
Art Unit 1763

JRL  
3/21/05